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ABSTRACT

This publication provides macro-indicators and complementary analyses and supporting data for use by policy and decision makers concerned with Ontario universities. These analytical tools are meant to unambiguously measure what is taking place in Canadian postsecondary education, and therefore, assist in focusing on what decisions need to be made. The indicators can be used to assist in: (1) measuring the real resources available to the Ontario university system as a function of the volume of activity over time, and (2) comparing trends in the resources made available for higher education in other jurisdictions and to other provincially-funded activities. This statistical compendium contains the macro-indicators and complementary analyses, together with commentary on the material, as well as a glossary of terms and definitions. A brief definition of what each macro-indicator is intended to measure is provided. The indicators are as follows: ratios of operating revenue to eligible full-time equivalent enrollment and basic income units; ratios of research expenditures to full-time faculty; percentage distribution of operating expenditures; and interprovincial comparisons. Derived system data which have been used in development of the indicators are provided in an appendix. Tabular data comprise half the volume. (GLR)

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ONTARIO UNIVERSITIES STATISTICAL COMPENDIUM 1970-90

PART A
MACRO-INDICATORS

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COUNCIL OF ONTARIO UNIVERSITIES
CONSEIL DES UNIVERSITÉS DE L'ONTARIO

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ONTARIO UNIVERSITIES STATISTICAL COMPENDIUM 1970-90

PART A
MACRO-INDICATORS

Prepared by the
Research Division
Council of Ontario Universities
Conseil des Universités de l'Ontario

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General Caveat

The reader of this compendium is cautioned that the number of institutions included in the various analyses contained in this report may vary from year to year and from table to table. If figures from different tables are being used, the reader should refer to the appropriate footnotes to ensure that the institutional coverage is comparable. It may be necessary to refer to the raw data contained in Part B of this compendium to derive comparable figures.

The reader should also be aware that the financial, enrolment and faculty data presented in this report may not be strictly comparable over the time period under study. Over the years changes have been effected in the definitions and rules governing the reporting of these data. These changes have been most acute with respect to the enrolment data and are documented in the appropriate footnotes.

Introduction

With increasing amounts of detailed data on post-secondary education becoming available each year, decision-makers continue to express hope for a concise series of macro-indicators which would unambiguously measure what was taking place and assist in focusing on what decisions had to be made. Such macro-indicators might serve a multiplicity of objectives. In this context, specific and limited objectives are desirable and for this publication they are identified to be:

- To measure the real resources available to the Ontario university system as a function of the volume of activity therein, over time; and

- To compare trends in the resources made available for higher education in other jurisdictions and to other provincially funded activities; and

Rather than attempt development of a series of *magic numbers*, it was decided that Council's objectives would best be met by publication of an interpretative statistical compendium, containing macro-indicators, complementary analyses and supporting data. The first edition of the statistical compendium, covering the period 1970-71 to 1978-79, was released in October 1980. The current edition presents figures for the ten-year period up to and including 1989-90, together with figures for selected years back to 1970-71.

Organization of the Compendium

To facilitate use of the statistical compendium by as wide and as varied a group of users as possible, the compendium material is presented in two parts. Part A is directed to the general user and contains the macro-indicators and complementary analyses, together with commentary on the material therein and a glossary of terms and definitions. In addition, derived system data which have been used in development of the indicators have been provided in an appendix to Part A. Part B is directed to the user who may wish to trace the development of the various indicators and contains the supporting data. To facilitate usage of this compendium, the table of contents in Part A also lists the contents of Part B. (It should be noted that many of the footnotes to the tables in Part A refer the user to sections in Part B.)

Before examining the indicators, a few general observations are in order. The earliest year presented in the historical time series in this report is 1970-71. This year was selected to reflect the first year of publication of financial data by the Council of Finance Officers - Universities of Ontario (COFO-UO). Many of the indicators in this compendium are based on data contained in the COFO-UO reports.

Many of the financially related indicators appearing in this compendium have been expressed in terms of *constant dollars*, i.e. actual revenue or expenditures in a given year have been deflated to account for the decreased value of the dollar in terms of purchasing power over the years. The principal difficulty encountered in formulating these indicators related to the choice of deflation indices. The most commonly used deflation index is the *Consumer Price Index (CPI)* computed monthly by Statistics Canada; as a result a number of the indicators employ the CPI as a deflator. However, the CPI is not particularly representative of the inflationary pressures which have an impact on the university sector. Accordingly, a number of deflation indices have been used in this compendium.

Historically, expenditures on salaries and benefits have represented about 80% of university operating expenditures and non-salary expenditures have accounted for the remaining 20%. To deflate non-salary expenditures the *Ontario University Non-Salary Price Index (OUNSPI)* was employed. Greater difficulty was encountered in selecting an appropriate salary deflator. In theory, the dollar deflator used should be as broadly based as possible. In the area of salaries and wages, the most broadly based index of earnings is the Statistics Canada industrial composite, comprising about 55% of the active labour force in Ontario. During the seventies, however, the rate of increase in average earnings in the industrial composite was steeper than the rate of increase experienced in the university sector; in the eighties this pattern was reversed. Accordingly, two deflation indices, which are a combination of 0.8 of a salary index and 0.2 of a non-salary index, were chosen to compute constant dollar revenue and expenditures. In both cases OUNSPI is used as the non-salary component.

The first index, the *COU Combined Index*, uses the industrial composite index as the salary component. This index might be said to measure the extent of inflationary pressure on the university sector.

The second index, the *Combined Index Based on Actual Academic Salary Increases,* uses actual average salary data for professorial ranks in Ontario universities as the salary component. As increases in academic salaries have generally been less than salary increases awarded in the private sector, this index might be said to measure the volume of goods and services universities have been able to purchase, notwithstanding inflationary pressures.

In addition, two similar deflation indices have been developed to deflate research expenditures which are a combination of 0.6 of the salary component and 0.4 of the non-salary component. (This 60/40 split is more representative of the pattern of salary and non-salary expenditures in the research area.)

Users will note that many of the tables in Part B of the compendium present data at the institutional level and yet institutional break-downs are not carried forward into Part A. This restriction in the present report to development of indicators at the system level represents a practical, rather than a policy, limitation. Any attempt to develop indicators that would permit valid interinstitutional comparisons will lead to the inevitable compounding of technical problems. Such indicators would have to be generated at a programme level or at least be designed to take account of the varying mix of programmes extant at each institution.

Changes from Previous Editions

Users of earlier editions of this compendium may have observed that figures expressed in constant dollar terms have varied marginally from edition to edition. This has been due to minor revisions in both the CPI and OUNSPI cost indices in succeeding versions of the compendium.

Commencing with the 1982-83 edition of the compendium the CPI and OUNSPI cost indices have been rebased. In previous years these cost indices employed a base of 1970-71 equal to 100.0. In the 1982-83 edition the base for these cost indices was revised so that 1980-81 was equal to 100.0. Commencing with the 1983-84 edition, it was decided that the cost indices should employ the most recent year as the base equal to 100.0. This means that in the current report the cost index values for years prior to 1989-90 will represent a percentage of the 1989-90 value. In terms of the figures expressed in constant dollar terms in this compendium, it means that such figures are different from corresponding figures in earlier editions.

Previous editions of this report presented a continuous series of data, beginning in 1970-71. However, in preparing the current report, it became apparent that there were now too many years of data to comfortably fit on many of the tables. The format employed in the current tables, presenting data for 1970-71, 1975-76 and for the years 1980-81 through 1989-90, has been designed to overcome this limitation.

Macro-indicators

This section of the statistical compendium presents an initial series of macro-indicators. Presented below is a brief description of what each indicator is intended to measure.

Ratios of Operating Revenue to Eligible FTE Enrolment and BIU's

Operating revenue in constant dollars per FTE student and per BIU is identified as perhaps the most significant gross indicator of the financial health of the Ontario university system. Viewed over time, and at the system level, this indicator measures the gains or losses in resources available to universities as a function of teaching activity. Three series of values for this indicator (based on three different deflation indices) are presented in Table A1-1.

Ratios of Research Expenditures to Full-time Faculty

This indicator measures the gains or losses in resources available to universities for research (as reported under *Sponsored Research* in the COFO-UO reports) as a function of full-time faculty holding professorial rank (full, associate or assistant professor). Table A1-2 presents three series of values for this indicator based on three different deflation indices.

Percentage Distribution of Operating Expenditures

One potential avenue of expression for changes in levels of global funding is the internal distribution of funds by the Ontario universities. Table A1-3 presents an analysis of the percentage distribution of operating expenditures among broad categories.

Interprovincial Comparisons

Comparative analyses of provincial expenditure on higher education are regarded as a major area of macro-indicators development. A series of indicators in this area has been developed by the Tripartite Committee on

Interprovincial Comparisons, comprised of representatives of COU, MCU and OCUA. The Tripartite Committee has published a series of eight indicators covering the period 1974-75 to 1987-88. The following description of these indicators has been extracted from the report of the Tripartite Committee.

> "...the (Tripartite) Committee focused on three major questions: how much financial support is provided to universities; how does university financing fit into each government's priorities; and, what proportion of provincial resources is directed towards university financing? Eight specific indicators were selected as the most useful in answering these questions:
>
> 1. Provincial operating grants per full-time equivalent (FTE) student;
> 2. Provincial operating grants per capita;
> 3. Provincial operating grants plus student aid per capita;
> 4. Provincial operating grants plus fees per FTE student;
> 5. Total operating income per FTE student;
> 6. Provincial operating grants plus student aid as a percentage of gross general (provincial government) expenditures;
> 7. Provincial operating grants per $1,000 of provincial personal income; and
> 8. Total university operating expenditures as a percentage of provincial gross domestic product.
>
> "The first indicator represents the level of funding provided by provincial governments, for each FTE student, both to institutions within the province and to institutions outside the province. In the latter case the government of one province provides funds, to an institution located in another province, to support the training of students originating in the province but enroled in special programs in institutions located outside the province's boundaries. Indicator Two

measures the various provincial governments' support for universities, within or outside the province, per capita of provincial population.

"Indicator Three compares, on a per capita basis, total provincial government support of university education, regardless of whether the funds go to the universities in the form of operating grants or to students in the form of student aid.

"The fourth and fifth indicators are based only on the revenues of institutions within the province. The fourth indicator allows for comparisons between provinces, for each FTE student, of the two major sources of university income - provincial operating grants and student fees. In many provinces the provincial government exercises control not only over the level of operating grants but also over student fee rates. The fifth indicator adds in all other university operating income and shows, for each FTE student, operating support from all sources received by institutions within each jurisdiction.

"Indicator Six shows each province's percentage of its government's expenditures directed towards university education in the form of provincial operating grants and student aid. Provincial government expenditures are represented by the measure of Gross General Expenditure, developed by Statistics Canada to make provincial government financial data comparable among provinces.

"The seventh and eighth indicators recognize that all provinces do not have an equal ability to pay for a university education for their citizens. The seventh indicator measures the ability of provinces to support their universities based on the level of personal income in each of the provinces. The eighth indicator measures the share of provincial economic activity, Provincial Gross Domestic Product (GDP), attributable to university expenditures."

The eight indicators from the report of the Tripartite Committee are reproduced in Table A1-4, with the addition of rankings by province in the first and final years.

TABLE A1-1

RATIOS OF OPERATING REVENUE (IN CONSTANT DOLLARS) TO ELIGIBLE FTE ENROLMENT AND BIU'S IN ONTARIO UNIVERSITIES

	COU Combined Index				Combined Index Based on Actual Academic Salary Increases				CPI			
	Revenue /FTE $	Index	Revenue /BIU $	Index	Revenue /FTE $	Index	Revenue /BIU $	Index	Revenue /FTE $	Index	Revenue /BIU $	Index
1970-71	*12,986*	*142.8*	*7,564*	*142.0*	*12,319*	*135.5*	*7,175*	*134.7*	*11,586*	*127.4*	*6,748*	*126.7*
1975-76	*9,898*	*108.9*	*5,824*	*109.3*	*10,112*	*111.2*	*5,950*	*111.7*	*9,569*	*105.2*	*5,631*	*105.7*
1980-81	9,364	103.0	5,451	102.3	9,729	107.0	5,663	106.3	9,130	100.4	5,315	99.8
1981-82	8,910	98.0	5,188	97.4	9,306	102.3	5,419	101.7	8,685	95.5	5,057	94.9
1982-83	8,929	98.2	5,216	97.9	8,992	98.9	5,252	98.6	8,651	95.1	5,053	94.9
1983-84	8,704	95.7	5,105	95.8	8,949	98.4	5,248	98.5	8,592	94.5	5,039	94.6
1984-85	8,702	95.7	5,104	95.8	9,004	99.0	5,280	99.1	8,702	95.7	5,104	95.8
1985-86	8,855	97.4	5,180	97.2	9,081	99.9	5,313	99.7	8,897	97.8	5,205	97.7
1986-87	9,121	100.3	5,342	100.3	9,205	101.2	5,392	101.2	9,079	99.8	5,318	99.8
1987-88	9,117	100.3	5,342	100.3	9,158	100.7	5,366	100.7	9,088	99.9	5,324	99.9
1988-89	9,060	99.6	5,313	99.7	9,089	100.0	5,330	100.1	9,080	99.9	5,324	99.9
1989-90	9,093	100.0	5,327	100.0	9,093	100.0	5,327	100.0	9,093	100.0	5,327	100.0

Notes: The number of institutions included in the figures varies from year to year. (Refer to Footnote 1 on Table I-2 in Appendix I for details on the institutions included in each year's figures).

Sources: Revenue data were obtained from Table I-2, enrolment and BIU's from Table I-3 in Appendix I. Please refer to the footnotes for these tables.

TABLE A1-2

RATIOS OF RESEARCH EXPENDITURES (IN CONSTANT DOLLARS, DEFLATED) TO FULL-TIME FACULTY (PROFESSORIAL RANKS) IN ONTARIO UNIVERSITIES

	COU Combined Research Index		Combined Research Index Based on Actual Academic Salary Increases		CPI	
	Research Expenditures/ FT Faculty $	Index	Research Expenditures/ FT Faculty $	Index	Research Expenditures/ FT Faculty $	Index
1970-71	*39,342*	*93.8*	*37,914*	*90.4*	*34,954*	*83.3*
1975-76	*27,891*	*66.5*	*28,345*	*67.6*	*26,678*	*63.6*
1980-81	31,170	74.3	32,033	76.4	30,807	73.4
1981-82	34,037	81.2	35,086	83.7	33,735	80.4
1982-83	37,039	88.3	37,243	88.8	36,638	87.4
1983-84	36,636	87.3	37,357	89.1	36,683	87.5
1984-85	38,026	90.7	38,978	92.9	38,639	92.1
1985-86	37,180	88.6	37,887	90.3	37,977	90.5
1986-87	36,757	87.6	37,008	88.2	37,135	88.5
1987-88	38,246	91.2	38,329	91.4	38,581	92.0
1988-89	41,755	99.6	41,842	99.8	42,151	100.5
1989-90	41,943	100.0	41,943	100.0	41,943	100.0

Notes: The number of institutions included in the figures varies from year to year. (Refer to Footnote 1 on Table I-4 in Appendix I for details on the institutions included in each year's figures).

Sources: Data on research expenditures were obtained from Table I-4. (Please refer to the footnotes for this table.) Data on full-time faculty in the professorial ranks (full, associate and assistant professors) were obtained from Statistics Canada's *Salaries and Salary Scales for Full-Time Teaching Staff at Canadian Universities.*

TABLE A1-3

PERCENTAGE DISTRIBUTION OF OPERATING EXPENDITURES IN ONTARIO UNIVERSITIES

	Academic Salaries	Non-Academic Salaries	Employee Benefits	Total Salaries & Benefits	Non Salary Items
1970-71	*41.8*	*29.3*	*5.8*	*76.9*	*23.1*
1975-76	*43.5*	*29.9*	*7.7*	*81.1*	*18.9*
1980-81	43.9	29.4	8.0	81.3	18.7
1981-82	43.7	29.2	8.3	81.3	18.7
1982-83	43.6	29.4	8.7	81.7	18.3
1983-84	42.7	29.6	9.0	81.3	18.7
1984-85	42.6	29.4	9.0	81.0	19.0
1985-86	42.3	29.4	9.2	80.9	19.1
1986-87	42.6	29.1	8.8	80.5	19.5
1987-88	43.0	29.5	8.3	80.7	19.3
1988-89	43.4	29.7	8.2	81.2	18.8
1989-90	43.1	30.0	8.1	81.1	18.9

Note: The number of institutions included in the figures varies from year to year. (Refer to Footnote 1 on Table I-2 in Appendix I for details on the institutions included in each year's figures.)

Sources: Data were obtained from Table B2-2 in Part B of this compendium.

TABLE A1-4

INDICATOR 1 - PROVINCIAL OPERATING GRANTS PER STUDENT

	1978-79 $		1979-80 $	1980-81 $	1981-82 $	1982-83 $	1983-84 $	1984-85 $	1985-86 $	1986-87 $	1987-88 $	
British Columbia	4,902.51	(3)	5,204.47	5,528.33	6,217.26	6,192.54	5,872.73	5,809.90	5,784.30	5,988.49	6,384.14	(6)
Alberta	5,340.34	(2)	5,814.51	6,284.50	6,811.75	7,328.40	7,182.33	7,114.44	7,264.42	7,388.54	7,158.35	(2)
Saskatchewan	4,616.38	(5)	5,097.90	5,303.85	5,619.08	6,149.10	6,235.25	6,361.06	6,685.61	6,622.83	6,747.66	(5)
Manitoba	4,123.66	(7)	4,770.83	4,499.30	5,062.45	5,361.53	5,582.07	5,704.42	6,072.93	6,335.62	6,803.67	(4)
Ontario*	4,001.94	(8)	4,139.66	4,273.00	4,475.18	4,820.87	5,000.47	5,179.59	5,449.77	5,884.71	6,104.65	(9)
Quebec	4,657.05	(4)	5,299.45	5,934.99	6,176.34	5,915.45	5,712.63	5,613.46	5,935.72	6,193.29	6,796.75	(5)
New Brunswick	4,363.64	(6)	4,755.05	4,914.62	4,974.26	5,228.17	5,122.10	5,440.04	5,894.51	6,196.84	6,550.53	(7)
Nova Scotia	3,801.73	(9)	4,042.02	4,340.39	4,858.52	4,986.47	5,044.58	5,250.03	5,538.70	5,752.09	5,940.73	(10)
Prince Edward Island	3,544.23	(10)	4,246.25	4,430.27	4,712.32	5,011.92	5,075.39	5,270.41	6,075.24	6,758.88	7,092.81	(3)
Newfoundland	5,485.42	(1)	5,993.67	5,683.74	5,847.28	6,911.51	7,787.63	6,994.26	6,761.11	6,998.65	7,459.83	(1)
Canada	4,442.58		4,825.91	5,137.83	5,457.50	5,613.71	5,607.79	5,651.18	5,905.70	6,201.88	6,519.25	
Canada (Excl. Ontario)	4,685.51		5,209.19	5,617.92	6,001.29	6,048.74	5,931.21	5,905.60	6,150.63	6,372.58	6,746.71	

Notes:

1. The figures for British Columbia, Alberta and Manitoba do not reflect payments made to Saskatchewan for Veterinary Medicine students. These students are included in the Saskatchewan data. These payments are not included in Saskatchewan's operating grants.

2. Rank is indicated in parentheses.

Source: *Interprovincial Comparisons of University Financing*, Tenth Report of the Tripartite Committee on Interprovincial Comparisons, February, 1991.

*Ontario figures were not derived from data found elsewhere in this compendium.

TABLE A1-4

INDICATOR 2 - PROVINCIAL OPERATING GRANTS PER CAPITA

	1978-79 $		1979-80 $	1980-81 $	1981-82 $	1982-83 $	1983-84 $	1984-85 $	1985-86 $	1986-87 $	1987-88 $	
British Columbia	91.40	(4)	95.18	101.89	115.91	123.01	120.26	113.63	109.53	112.15	120.86	(10)
Alberta	108.16	(1)	112.84	117.62	131.77	156.29	166.16	175.17	177.13	185.37	179.96	(3)
Saskatchewan	88.17	(6)	93.79	99.51	112.31	123.71	129.33	133.85	140.27	144.08	143.87	(9)
Manitoba	88.93	(5)	100.08	100.70	114.73	133.75	147.37	148.88	153.99	158.46	165.28	(5)
Ontario*	83.64	(8)	86.67	92.13	100.50	113.07	118.47	124.75	130.23	140.69	147.03	(8)
Quebec	107.73	(2)	121.97	141.94	154.74	155.74	157.29	156.20	168.58	176.32	193.81	(1)
New Brunswick	84.57	(7)	91.00	98.30	108.66	121.71	127.19	134.08	142.58	151.21	162.43	(6)
Nova Scotia	96.59	(3)	102.72	114.31	128.91	141.50	150.30	158.46	166.61	172.74	182.18	(2)
Prince Edward Island	67.21	(10)	76.29	82.02	89.32	102.39	108.07	113.41	122.66	141.15	155.82	(7)
Newfoundland	82.79	(9)	92.26	98.41	111.61	121.70	127.28	130.20	140.14	154.86	166.17	(4)
Canada	93.91		100.97	110.49	122.01	132.17	136.46	139.26	145.39	153.40	161.81	
Canada (Excl. Ontario)	99.68		108.95	120.64	133.84	142.71	146.45	147.37	153.92	160.62	170.31	

Notes:

1. The figures for British Columbia, Alberta and Manitoba do not reflect payments made to Saskatchewan for Veterinary Medicine students.

2. Rank is indicated in parentheses.

Source: *Interprovincial Comparisons of University Financing*, Tenth Report of the Tripartite Committee on Interprovincial Comparisons, Februrary, 1991.

*Ontario figures were not derived from data found elsewhere in this compendium.

TABLE A1-4

INDICATOR 3 - PROVINCIAL OPERATING GRANTS PLUS STUDENT AID PER CAPITA

	1978-79 $		1979-80 $	1980-81 $	1981-82 $	1982-83 $	1983-84 $	1984-85 $	1985-86 $	1986-87 $	1987-88 $	
British Columbia	94.40	(4)	98.72	105.41	120.33	129.26	124.15	113.63	110.84	112.98	126.16	(10)
Alberta	110.63	(2)	115.54	120.20	134.26	159.28	173.20	183.56	190.98	201.26	194.74	(2)
Saskatchewan	93.27	(6)	98.34	104.58	117.33	130.39	137.41	142.14	150.35	157.73	157.46	(8)
Manitoba	93.43	(5)	104.93	105.84	120.95	140.71	153.98	155.60	160.89	165.41	173.45	(6)
Ontario*	89.08	(8)	92.15	97.85	106.18	119.75	125.26	131.61	137.55	149.19	156.52	(9)
Quebec	113.87	(1)	129.74	151.16	165.63	168.76	173.06	175.30	189.62	195.85	212.19	(1)
New Brunswick	88.34	(9)	95.45	104.49	116.91	134.54	137.61	146.41	153.46	161.88	174.93	(5)
Nova Scotia	102.86	(3)	107.61	121.24	137.74	148.12	156.98	166.71	174.98	180.42	192.97	(3)
Prince Edward Island	71.03	(10)	80.62	87.00	96.12	113.35	116.42	124.52	134.91	152.37	165.53	(7)
Newfoundland	89.24	(7)	99.97	107.56	120.10	135.73	138.03	135.74	147.45	167.06	177.26	(4)
Canada	98.89		106.54	116.68	128.87	140.49	145.53	148.90	156.44	164.83	173.86	
Canada (Excl. Ontario)	104.39		114.56	127.10	141.35	151.94	156.79	158.57	167.07	173.71	183.84	

Notes:

1. The figures for British Columbia, Alberta and Manitoba do not reflect payments made to Saskatchewan for Veterinary Medicine students.
2. Rank is indicated in parentheses.

Source: *Interprovincial Comparisons of University Financing*, Tenth Report of the Tripartite Committee on Interprovincial Comparisons, February, 1991.

*Ontario figures were not derived from data found elsewhere in this compendium.

TABLE A1-4

INDICATOR 4 - PROVINCIAL OPERATING GRANTS PLUS FEES PER STUDENT

	1978-79 $		1979-80 $	1980-81 $	1981-82 $	1982-83 $	1983-84 $	1984-85 $	1985-86 $	1986-87 $	1987-88 $	
British Columbia	5,393.47	(3)	5,701.83	6,073.74	6,838.90	6,976.89	6,726.68	6,897.32	7,005.19	7,281.38	7,767.79	(7)
Alberta	5,888.16	(2)	6,448.62	6,899.71	7,440.28	8,062.58	7,961.46	7,919.11	8,180.59	8,330.52	8,144.35	(4)
Saskatchewan	5,288.08	(4)	5,769.05	6,033.75	6,381.43	7,092.37	7,446.65	7,674.04	8,025.71	7,970.28	8,215.45	(3)
Manitoba	4,660.71	(8)	5,350.19	5,093.52	5,752.73	6,058.05	6,380.93	6,573.48	7,002.92	7,318.58	7,922.22	(5)
Ontario*	4,771.43	(7)	4,957.01	5,199.20	5,529.15	6,056.01	6,351.87	6,573.50	6,921.33	7,411.77	7,637.54	(9)
Quebec	5,071.82	(5)	5,745.88	6,389.06	6,659.14	8,396.00	6,189.54	6,122.62	6,494.06	6,743.66	7,358.10	(10)
New Brunswick	4,999.77	(6)	5,447.50	5,600.72	5,734.40	6,134.19	6,123.65	6,596.70	7,129.04	7,462.74	7,802.44	(6)
Nova Scotia	4,563.52	(9)	4,875.58	5,247.42	5,985.90	6,286.42	6,469.28	6,735.96	7,178.21	7,416.48	7,660.34	(8)
Prince Edward Island	4,176.81	(10)	4,745.73	5,082.96	5,379.49	5,642.62	5,755.10	5,875.11	7,306.41	9,446.78	10,300.21	(1)
Newfoundland	6,132.43	(1)	6,660.13	6,368.52	6,566.28	7,926.52	8,848.80	8,068.47	7,919.01	8,201.29	8,701.61	(2)
Canada	5,042.64		5,466.34	5,828.84	6,227.92	6,494.76	6,558.07	6,665.45	6,996.11	7,328.43	7,681.38	
Canada (Excl. Ontario)	5,192.19		5,750.86	6,178.44	6,615.08	6,735.55	6,667.90	6,715.06	7,036.29	7,283.57	7,705.44	

Notes: 1. New Brunswick - University of New Brunswick fiscal period was for ten months in 1978-79.

2. Saskatchewan figures include the grants for Veterinary Medicine training received from British Columbia, Alberta and Manitoba.

3. Rank is indicated in parentheses.

Source: *Interprovincial Comparisons of University Financing*, Tenth Report of the Tripartite Committee on Interprovincial Comparisons, February, 1991.

*Ontario figures were not derived from data found elsewhere in this compendium.

TABLE A1-4

INDICATOR 5 - TOTAL OPERATING INCOME PER STUDENT

	1978-79 $		1979-80 $	1980-81 $	1981-82 $	1982-83 $	1983-84 $	1984-85 $	1985-86 $	1986-87 $	1987-88 $	
British Columbia	5,519.27	(4)	5,842.22	6,230.75	7,093.49	7,177.68	6,890.44	7,115.42	7,458.08	7,975.60	7,907.95	(10)
Alberta	6,023.98	(2)	6,613.04	7,599.50	8,317.57	9,688.53	8,834.58	8,829.45	9,106.77	9,245.64	8,899.94	(2)
Saskatchewan	5,662.23	(3)	6,231.91	6,378.39	6,822.46	7,961.13	7,942.67	8,053.59	8,746.52	8,552.83	8,250.42	(5)
Manitoba	4,779.61	(8)	5,422.73	5,482.78	6,034.50	6,295.44	6,563.51	6,841.17	7,294.70	7,731.43	8,636.65	(4)
Ontario*	5,037.51	(6)	5,239.25	5,420.97	5,794.10	6,350.16	6,731.18	6,826.55	7,227.52	7,659.96	8,011.31	(9)
Quebec	5,347.21	(5)	5,889.84	6,682.59	7,009.33	6,874.26	6,689.17	6,901.51	7,155.43	7,485.97	8,013.95	(8)
New*Brunswick	4,767.22	(9)	5,715.72	5,925.20	6,094.35	6,468.17	6,505.42	6,852.69	7,369.14	7,702.54	8,142.49	(6)
Nova Scotia	4,829.20	(7)	5,161.93	5,647.46	6,381.48	6,739.92	6,997.08	7,053.22	7,508.34	7,766.48	8,082.00	(7)
Prince Edward Island	4,460.65	(10)	5,049.64	5,143.25	5,447.15	5,773.93	5,754.20	6,136.53	7,474.19	9,544.82	10,411.84	(1)
Newfoundland	6,821.16	(1)	7,222.26	7,052.23	6,792.82	8,286.61	9,130.85	8,310.22	8,112.45	8,528.27	8,767.41	(3)
Canada	5,278.92		5,686.83	6,133.94	6,580.47	6,973.71	6,995.06	7,138.51	7,489.09	7,849.38	8,150.35	
Canada (Excl. Ontario)	5,412.03		5,936.85	6,529.81	7,016.17	7,315.91	7,135.60	7,306.84	7,629.63	7,951.35	8,226.65	

Notes: 1. New Brunswick - University of New Brunswick fiscal period was for ten months in 1978-79.

2. Saskatchewan figures include the grants for Veterinary Medicine training received from British Columbia, Alberta and Manitoba.

3. Rank is indicated in parentheses.

Source: *Interprovincial Comparisons of University Financing*, Tenth Report of the Tripartite Committee on Interprovincial Comparisons, February, 1991.

*Ontario figures were not derived from data found elsewhere in this compendium.

TABLE A1-4

INDICATOR 6 - PROVINCIAL OPERATING GRANTS PLUS STUDENT AID AS A % OF GROSS GENERAL EXPENDITURES

	1978-79 %	1979-80 %	1980-81 %	1981-82 %	1982-83 %	1983-84 %	1984-85 %	1985-86 %	1986-87 %	1987-88 %
British Columbia	4.89 (5)	4.62	4.19	4.17	3.68	3.33	2.97	2.81	2.78	2.99 (10)
Alberta	4.59 (6)	3.54	3.77	3.44	3.00	3.30	3.50	3.31	3.31	3.33 (8)
Saskatchewan	4.55 (7)	4.14	3.85	3.79	3.58	3.57	3.38	3.10	3.22	3.30 (9)
Manitoba	5.20 (2)	5.10	4.52	4.24	4.24	4.01	3.96	3.70	3.47	3.57 (6)
Ontario*	4.91 (4)	4.68	4.57	4.34	4.32	4.18	4.11	3.75	3.95	3.89 (3)
Quebec	4.95 (3)	5.04	5.00	4.78	4.35	4.09	3.85	3.92	3.89	3.94 (2)
New Brunswick	4.51 (8)	4.49	4.31	4.15	3.94	3.83	3.81	3.74	3.73	3.70 (4)
Nova Scotia	5.22 (1)	5.18	5.03	4.50	4.64	4.60	4.47	4.50	4.54	4.55 (1)
Prince Edward Island	3.15 (10)	3.27	3.10	3.20	3.31	3.35	3.40	3.37	3.62	3.64 (5)
Newfoundland	3.41 (9)	3.70	3.72	4.00	3.92	3.53	3.42	3.40	3.57	3.54 (7)
Canada	4.83	4.61	4.51	4.31	4.02	3.89	3.78	3.63	3.68	3.71
Canada (Excl. Ontario)	4.79	4.57	4.49	4.29	3.90	3.78	3.64	3.57	3.56	3.63

Notes:

1. The figures for British Columbia, Alberta and Manitoba do not reflect payments made to Saskatchewan for Veterinary Medicine students.
2. Rank is indicated in parentheses.

Source: *Interprovincial Comparisons of University Financing*, Tenth Report of the Tripartite Committee on Interprovincial Comparisons, February, 1991.

*Ontario figures were not derived from data found elsewhere in this compendium.

TABLE A1-4

INDICATOR 7 - PROVINCIAL OPERATING GRANTS PER $1,000 OF PROVINCIAL PERSONAL INCOME

	1978-79 $		1979-80 $	1980-81 $	1981-82 $	1982-83 $	1983-84 $	1984-85 $	1985-86 $	1986-87 $	1987-88 $	
British Columbia	10.10	(9)	9.50	8.92	8.70	8.53	8.18	7.45	6.79	6.70	6.83	(10)
Alberta	12.68	(5)	11.57	10.50	9.80	10.50	10.96	11.14	10.31	10.41	9.81	(7)
Saskatchewan	12.03	(6)	11.59	11.18	9.88	10.10	10.53	10.43	10.19	9.67	9.51	(8)
Manitoba	11.87	(7)	12.17	11.19	10.50	11.14	11.74	10.79	10.63	10.49	10.33	(6)
Ontario*	9.35	(10)	8.75	8.39	7.92	8.09	7.95	7.65	7.56	7.68	7.39	(9)
Quebec	13.66	(4)	13.90	14.34	13.67	12.59	12.14	11.14	11.28	11.19	11.38	(5)
New Brunswick	13.93	(3)	13.64	13.31	12.75	12.70	12.36	11.92	11.79	11.66	11.63	(4)
Nova Scotia	15.12	(1)	14.27	14.58	14.35	13.94	13.77	13.35	12.57	12.34	12.12	(2)
Prince Edward Island	11.27	(8)	11.68	11.43	10.59	11.17	11.03	10.53	10.96	11.28	12.01	(3)
Newfoundland	14.57	(2)	14.40	14.20	14.05	13.75	13.32	12.91	12.71	13.24	13.01	(1)
Canada	11.39		11.01	10.76	10.20	10.06	9.91	9.39	9.20	9.19	9.05	
Canada (Excl. Ontario)	12.69		12.44	12.22	11.57	11.26	11.14	10.53	10.26	10.20	10.18	

Notes:

1. The figures for British Columbia, Alberta and Manitoba do not reflect payments made to Saskatchewan for Veterinary Medicine students.
2. Rank is indicated in parentheses.

Source: *Interprovincial Comparisons of University Financing*, Tenth Report of the Tripartite Committee on Interprovincial Comparisons, February, 1991.

*Ontario figures were not derived from data found elsewhere in this compendium.

TABLE A1-4

INDICATOR 8 - TOTAL UNIVERSITY OPERATING EXPENDITURES AS A % OF PROVINCIAL GROSS DOMESTIC PRODUCT

	1978-79 %	1979-80 %	1980-81 %	1981-82 %	1982-83 %	1983-84 %	1984-85 %	1985-86 %	1986-87 %	1987-88 %
British Columbia	0.89 (9)	0.83	0.82	0.80	0.86	0.82	0.78	0.77	0.78	0.72 (10)
Alberta	0.85 (10)	0.76	0.72	0.73	0.91	0.86	0.87	0.81	0.96	0.94 (8)
Saskatchewan	1.13 (6)	1.05	0.94	0.92	1.08	1.11	1.04	1.02	1.10	1.05 (7)
Manitoba	1.14 (5)	1.10	1.12	1.06	1.17	1.22	1.15	1.11	1.13	1.17 (5)
Ontario*	0.95 (8)	0.89	0.88	0.86	0.94	0.92	0.86	0.86	0.84	0.80 (9)
Quebec	1.35 (3)	1.27	1.44	1.42	1.34	1.29	1.27	1.26	1.23	1.17 (5)
New Brunswick	1.13 (6)	1.34	1.66	1.54	1.55	1.49	1.41	1.41	1.33	1.35 (4)
Nova Scotia	1.90 (1)	1.88	2.10	2.07	1.96	1.91	1.78	1.72	1.66	1.62 (1)
Prince Edward Island	1.15 (4)	1.07	1.07	1.03	1.13	1.08	1.06	1.17	1.41	1.58 (2)
Newfoundland	1.79 (2)	1.60	1.66	1.58	1.65	1.56	1.49	1.51	1.58	1.53 (3)
Canada	1.08	1.01	1.04	1.02	1.08	1.05	1.00	0.99	1.00	0.96
Canada (Excl. Ontario)	1.16	1.08	1.14	1.11	1.16	1.12	1.10	1.07	1.11	1.07

Notes: 1. New Brunswick - University of New Brunswick fiscal period was for ten months in 1978-79.

2. Saskatchewan figures include the grants for Veterinary Medicine training received from British Columbia, Alberta and Manitoba.

3. Rank is indicated in parentheses.

Source: *Interprovincial Comparisons of University Financing*, Tenth Report of the Tripartite Committee on Interprovincial Comparisons, February, 1991.

*Ontario figures were not derived from data found elsewhere in this compendium.

Complementary Analysis

In this section of the statistical compendium a series of analyses is presented which provide additional insights or supplementary information to the macro-indicators presented in the previous section.

Percentage Analysis of Operating Revenues by Source of Revenue

Table A2-1 presents a percentage analysis of operating revenue by major sources of revenue; formula and other provincial government grants, tuition and miscellaneous fees and other sources of revenue.

Ratios of Non-salary Operating Expenditures to Eligible FTE Enrolment

Table A2-2 presents two series (employing OUNSPI and the CPI as deflators respectively) of ratios of non-salary operating expenditures in constant dollars to FTE enrolment.

Ratios of Research Expenditures to Operating Expenditures

The period since 1970-71 has been characterized by reduced rates of increase in operating expenditures. There is some interest in whether levels of expenditure on research (as reported under *Sponsored Research* in the COFO-UO reports) have suffered a similar fate. Table A2-3 presents data on actual research expenditures and operating expenditures and the ratio of research to operating expenditures.

Ratios of BIU's to Eligible FTE Enrolment

Table A2-4 presents data showing FTE enrolment, BIU's and BIU/FTE enrolment ratios for the undergraduate and graduate sectors as well as totals for the Ontario Universities.

Student/faculty Ratios

Table A2-5 presents data showing FTE enrolment/FTE faculty ratios for the Ontario universities. The salaries and wages figures used in the calculations of FTE faculty include salaries paid to academic staff from lecturers to deans inclusive as well as payments made to staff members without academic rank who are engaged in instruction and research. This latter group may include instructors, tutors, markers, demonstrators, teaching assistants, research assistants, invigilators, clinical assistants, and post-doctoral fellows, provided payments to these staff come out of university operating funds. If university student/faculty ratios are being compared to ratios for other sectors, care must be taken to ensure that comparable staff are included for the non-university sectors.

While student/faculty ratios could have been developed based only on ranked academic staff, it was deemed more appropriate to include the fullest possible range of teaching resources. Such an approach will take account of potentially idiosyncratic variations in the distribution of teaching resources between ranked and non-ranked teaching staff which might occur from year to year or between institutions.

In recent years a number of alternative methods of calculating student/faculty ratios have been advanced, ranging from the simplified approach using aggregated data to the highly complex methodology requiring large amounts of detailed data. As the principal focus in this report is on the changes in the ratio over time, it was concluded from an examination of a number of methodologies that the simplified approach adopted in this compendium yields valid results and that the extra efforts demanded by more complicated strategies would not be warranted. It should be noted, however, that the ratios presented in this compendium may differ from series of student/faculty ratios previously published by COU.

TABLE A2-1

PERCENTAGE ANALYSIS OF OPERATING REVENUES BY SOURCE OF REVENUE IN ONTARIO UNIVERSITIES

	Provincial Government Grants			Fees			Other Sources
	Formula	Other	Subtotal	Tuition	Misc.	Subtotal	
1970-71	75.5	4.1	79.6	15.8	0.9	16.7	3.7
1975-76	75.7	3.4	79.0	15.9	0.9	16.8	4.2
1980-81	77.6	1.7	79.3	15.8	1.0	16.8	3.9
1981-82	76.3	1.6	77.9	16.9	1.0	17.9	4.2
1982-83	74.6	2.1	76.6	18.1	1.1	19.3	4.1
1983-84	74.4	2.5	76.8	18.8	1.2	19.9	3.3
1984-85	74.7	1.9	76.6	18.8	1.2	20.0	3.4
1985-86	74.1	2.4	76.5	18.7	1.3	20.0	3.4
1986-87	72.2	4.9	77.1	18.3	1.3	19.6	2.2
1987-88	70.0	7.4	77.4	18.3	1.2	19.4	2.1
1988-89	70.1	6.8	76.9	18.7	1.2	19.9	3.2
1989-90	66.8	9.3	76.1	19.0	1.2	20.2	3.7

Note: The number of institutions included in the figures varies from year to year. (Refer to Footnote 1 on Table I-2 in Appendix I for on the institutions included in each year's figures.)

Source: *Financial Report of Ontario Universities*, COFO-UO. Data exclude OMAF grants and MCU payments in lieu of municipal

TABLE A2-2

RATIOS OF NON-SALARY OPERATING EXPENDITURES (IN CONSTANT DOLLARS, DEFLATED) TO ELIGIBLE FTE ENROLMENT IN ONTARIO UNIVERSITIES

	Ontario University Non-Salary Price Index		CPI	
	Non-Salary Expenditures /FTE $	Index	Non-Salary Expenditures /FTE $	Index
1970-71	*3,081*	*183.1*	*2,680*	*159.2*
1975-76	*1,957*	*116.3*	*1,812*	*107.7*
1980-81	1,662	98.8	1,709	101.5
1981-82	1,569	93.2	1,636	97.2
1982-83	1,486	88.3	1,562	92.8
1983-84	1,535	91.2	1,605	95.4
1984-85	1,542	91.6	1,645	97.7
1985-86	1,595	94.8	1,708	101.5
1986-87	1,673	99.4	1,767	105.0
1987-88	1,656	98.4	1,734	103.0
1988-89	1,613	95.8	1,666	99.0
1989-90	1,683	100.0	1,683	100.0

Note: The number of institutions included in the figures varies from year to year. (Refer to Footnote 1 on Table I-5 in Appendix I for details on the institutions included in each year's figures.)

Source: Non-salary operating expenditures were obtained from Table I-5, enrolment from Table I-3 in Appendix I. Please refer to the footnotes for these tables.

TABLE A2-3

RATIO OF RESEARCH EXPENDITURES TO OPERATING EXPENDITURES IN ONTARIO UNIVERSITIES

	Research Expenditures ($000's)	Operating Expenditures ($000's)	Research Expenditures/ Operating Expenditures
1970-71	*62,471*	*391,663*	*0.160*
1975-76	*98,323*	*705,758*	*0.139*
1980-81	186,631	1,061,502	0.176
1981-82	229,486	1,193,698	0.192
1982-83	276,903	1,350,742	0.205
1983-84	295,964	1,469,933	0.201
1984-85	328,374	1,548,952	0.212
1985-86	346,606	1,654,798	0.209
1986-87	357,926	1,750,686	0.204
1987-88	391,654	1,861,194	0.210
1988-89	454,769	1,989,386	0.229
1989-90	484,020	2,170,452	0.223

Note: The number of institutions included in the figures varies from year to year. (Refer to Footnote 1 on Table I-4 in Appendix I for details on the institutions included in each year's figures.)

Source: Research expenditure data were obtained from Table I-4, operating expenditure data from Table I-6 in Appendix I. Please refer to the footnotes for these tables.

TABLE A2-4

RATIOS OF BIU'S TO ELIGIBLE FTE ENROLMENT IN ONTARIO UNIVERSITIES[1]

	Undergraduate			Graduate			Total		
	FTE Enrolment [2,3]	BIU's [4]	BIU/FTE Enrolment [5]	FTE Enrolment	BIU's	BIU/FTE Enrolment	FTE Enrolment	BIU's [6]	BIU/FTE Enrolment
1970-71	*120,929.4*	*171,665.0*	*1.42*	*15,133.6*	*55,653.5*	*3.68*	*136,063.0*	*227,478.8*	*1.67*
1975-76	*174,788.0*	*260,759.2*	*1.49*	*19,313.8*	*64,332.1*	*3.33*	*194,101.8*	*326,377.9*	*1.68*
1980-81	175,310.1	270,109.5	1.54	17,919.3	60,816.9	3.39	193,229.4	331,956.9	1.72
1981-82	184,158.6	283,632.8	1.54	18,512.2	63,293.5	3.42	202,670.8	348,063.3	1.72
1982-83	194,847.3	298,860.5	1.53	19,060.1	66,419.9	3.48	213,907.4	366,191.8	1.71
1983-84	201,421.9	308,230.2	1.53	19,399.3	67,565.4	3.48	220,821.2	376,530.1	1.71
1984-85	202,276.1	309,111.6	1.53	19,638.3	68,741.1	3.50	221,914.4	378,381.5	1.71
1985-86	200,569.8	306,798.4	1.53	19,631.1	68,985.9	3.51	220,200.9	376,394.4	1.71
1986-87	200,975.0	306,704.1	1.53	20,045.3	70,016.1	3.49	221,020.3	377,330.9	1.71
1987-88	206,635.3	314,615.5	1.52	20,605.5	72,742.9	3.53	227,240.8	387,843.6	1.71
1988-89	214,474.2	325,324.8	1.52	21,421.5	76,436.8	3.57	235,895.7	402,261.0	1.71
1989-90	221,632.3	336,384.6	1.52	22,101.5	79,455.5	3.60	243,733.9	416,054.6	1.71

Note: The number of institutions included in the figures varies from year to year. Data exclude OISE in 1970-71, Ryerson in 1970-71, Dominicain prior to 1973-74 and OCA prior to 1975-76. Church related affiliates are included in all years.

1. Sources: Ministry of Colleges and Universities *Statistical Summary* and *Financial Report*.

2. Commencing in 1976-77, undergraduate figures are reported as FFTE enrolment. Prior to 1976-77, the divisor used to convert course registrations into FTE of part-time undergraduate enrolment was 6 in 1970-71, 5.5 in 1972-73 and 5 in 1973-74 to 1975-76.

3. Data exclude undergraduate off-campus registrations at Waterloo.

4. Data include BIU's for church related affiliates at 100%.

5. Data include FTE of graduate summer school.

6. Data include minima-maxima adjustments for graduate entitlement and imputing adjustments.

TABLE A2-5

STUDENT/FACULTY RATIOS IN ONTARIO UNIVERSITIES

	FTE Enrolment [1]	FTE Faculty [2]	FTE Enrolment/ FTE Faculty
1970-71	*125,551.6*	*9,756.4*	*12.9*
1975-76	*177,212.7*	*12,133.5*	*14.6*
1980-81	193,229.4	13,034.4	14.8
1981-82	202,670.8	13,112.5	15.5
1982-83	213,907.4	13,099.0	16.3
1983-84	220,821.2	13,276.9	16.6
1984-85	221,914.4	13,386.8	16.6
1985-86	220,200.9	13,453.9	16.4
1986-87	221,020.3	13,579.1	16.3
1987-88	227,240.8	13,801.7	16.5
1988-89	235,895.7	14,151.6	16.7
1989-90	243,733.9	14,418.1	16.9

Note: The number of institutions included in the figures varies from year to year. Data exclude Wilfrid Laurier prior to 1973-74, OISE prior to 1975-76 and Algoma, Nipissing, Hearst, Ryerson, Regis, Dominicain, OCA and church related affiliates prior to 1978-79.

1. Sources: Ministry of Colleges and Universities *Statistical Summary* and *Financial Report*. Commencing in 1976-77, undergraduate figures are reported as FFTE enrolment. Prior to 1976-77, the divisor used to convert course registrations into FTE of part-time undergraduate enrolment was 6 in 1970-71, 5.5 in 1972-73 and 5 in 1973-74 to 1975-76. Data exclude undergraduate off-campus registrations at Waterloo but include FTE of graduate summer school.

2. FTE faculty were obtained by dividing the sum of salaries and wages for *academic ranks* and *other instruction and research* under *operating expenses* (from COFO-UO's *Financial Report of Ontario Universities*) by the average salary on a fiscal year basis for academic staff in the professorial ranks (from Statistics Canada's *Salaries and Salary Scales of Full-time Teaching Staff at Canadian Universities*) for each institution. Commencing in 1978-79, COFO-UO salaries data for church related affiliates were included but the average salary divisor used was the average salary for the parent institution. Similarly, commencing in 1978-79, the average salary divisor used for Algoma, Nipissing, Hearst, Ryerson, Dominicain and OCA was the average salary for all universities from Table B4-1 in Part B of this compendium.

Appendix I

Supplementary System Data

TABLE I-1

COST INDICES

	For Operating Expenditures				For Research Expenditures	
	COU Combined Index[1]	Combined Index Based on Actual Academic Salary Increases[2]	Ontario University Non-Salary Price Index[3]	CPI[4]	COU Combined Research Index[5]	Combined Research Index Based on Actual Academic Salary Increases[6]
1970-71	*24.0*	*25.3*	*23.4*	*26.9*	*23.9*	*24.8*
1975-76	*37.8*	*37.0*	*36.2*	*39.1*	*37.4*	*36.8*
1980-81	58.6	56.4	61.8	60.1	59.4	57.8
1981-82	65.8	63.0	70.4	67.5	66.9	64.9
1982-83	71.5	71.0	77.6	73.8	73.0	72.6
1983-84	76.6	74.5	81.1	77.6	77.7	76.2
1984-85	80.6	77.9	86.0	80.6	81.9	79.9
1985-86	84.3	82.2	89.8	83.9	85.7	84.1
1986-87	87.0	86.2	92.3	87.4	88.3	87.7
1987-88	90.9	90.5	95.5	91.2	92.0	91.8
1988-89	95.2	94.9	98.1	95.0	95.9	95.7
1989-90	100.0	100.0	100.0	100.0	100.0	100.0

1. This index is a combination of 0.8 of a salary index and 0.2 of a non-salary index. The salary component is the industrial composite index from Statistics Canada's *Employment Earnings and Hours*. The non-salary component is the COU *Ontario University Non-Salary Price Index*.

2. This index is a combination of 0.8 of a salary index and 0.2 of a non-salary index. The salary component has been derived from actual average salary data for full, associate and assistant professors as reported in Statistics Canada's *Salaries and Salary Scales of Full-Time Teaching Staff at Canadian Universities*. The non-salary component is the COU *Ontario University Non-Salary Price Index*.

3. Source: *The Financial Position of Universities in Ontario: 1991*. Council of Ontario Universities 1991.

4. Source: *The Consumer Price Index*, Statistics Canada, monthly.

5. This index is similar to 1 above but uses a combination of 0.6 of the salary index and 0.4 of the non-salary index.

6. This index is similar to 2 above but uses a combination of 0.6 of the salary index and 0.4 of the non-salary index.

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TABLE I-2

DETERMINATION OF OPERATING REVENUE IN CONSTANT DOLLARS

	Operating Revenue in Current Dollars [1]	Operating Revenue in Constant Dollars, Deflated by:		
	($000's)	COU Combined Index [2] ($000's)	Combined Index Based on Actual Academic Salary Increases [3] ($000's)	CPI [4] ($000's)
1970-71	*391,295*	*1,830,396*	*1,546,621*	*1,454,628*
1975-76	*702,865*	*1,859,431*	*1,899,635*	*1,797,609*
1980-81	1,060,314	1,809,410	1,879,989	1,764,250
1981-82	1,188,184	1,805,751	1,886,006	1,760,273
1982-83	1,365,621	1,909,959	1,923,410	1,850,435
1983-84	1,472,278	1,922,034	1,976,212	1,897,265
1984-85	1,556,461	1,931,093	1,998,024	1,931,093
1985-86	1,643,767	1,949,902	1,999,717	1,959,198
1986-87	1,753,793	2,015,854	2,034,563	2,006,628
1987-88	1,883,327	2,071,867	2,081,024	2,065,052
1988-89	2,034,737	2,137,329	2,144,085	2,141,828
1989-90	2,216,246	2,216,246	2,216,246	2,216,246

1. Source: *Financial Report of Ontario Universities*, COFO-UO. Data exclude OMAF grants, MCU payments in lieu of municipal taxes, church related affiliates prior to 1978-79 (the arts and science component at Toronto has been included since 1974-75), Algoma in 1970-71, 1972-73, 1973-74, 1975-76 and 1976-77, Nipissing in 1970-71, Hearst in 1970-71, OCA prior to 1977-78, OISE prior to 1975-76, Ryerson prior to 1975-76 and Wilfrid Laurier prior to 1973-74.

2. This index is a combination of 0.8 of a salary index and 0.2 of a non-salary index. The salary component is the industrial composite index from Statistics Canada's *Employment Earnings and Hours*. The non-salary component is the COU *Ontario University Non-Salary Price Index*.

3. This index is a combination of 0.8 of a salary index and 0.2 of a non-salary index. The salary component has been derived from actual average salary data for full, associate and assistant professors as reported in Statistics Canada's *Salaries and Salary Scales of Full-Time Teaching Staff at Canadian Universities*. The non-salary component is the COU *Ontario University Non-Salary Price Index*.

4. Source: *The Consumer Price Index*, Statistics Canada, monthly.

TABLE I-3

ELIGIBLE FTE ENROLMENT AND BIU'S IN ONTARIO UNIVERSITIES[1] (for those institutions included in COFO-UO reports)

	FTE Enrolment [2,3]	BIU's[4]
1970-71	*125,551.6*	*215,556.8*
1975-76	*187,866.2*	*319,243.1*
1980-81	193,229.4	331,956.9
1981-82	202,670.8	348,063.3
1982-83	213,907.4	366,191.8
1983-84	220,821.2	376,530.1
1984-85	221,914.4	378,381.5
1985-86	220,200.9	376,394.4
1986-87	221,020.3	377,330.9
1987-88	227,240.8	387,843.6
1988-89	235,895.7	402,261.0
1989-90	243,733.9	416,054.6

1. Sources: Ministry of Colleges and Universities *Statistical Summary* and *Financial Report*. From 1974-75 to 1977-78, additional data for church related affiliates were provided by the parent universities. Data exclude Algoma in 1971-72, 1972-73, 1973-74, 1975-76 and 1976-77, Nipissing in 1970-71, Hearst in 1970-71, OCA prior to 1977-78, OISE prior to 1975-76, Ryerson prior to 1975-76 and Wilfrid Laurier prior to 1973-74. Prior to 1978-79, students enrolled in church related institutions were excluded (with the exception of Toronto which included students in arts and science programmes commencing in 1974-75).

2. Commencing in 1976-77, undergraduate figures are reported as FFTE enrolment. Prior to 1976-77, the divisor used to convert course registrations into FTE of part-time undergraduate enrolment was 6 in 1970-71, 5.5 in 1972-73 and 5 in 1973-74 to 1975-76.

3. Data include FTE of graduate summer school but exclude undergraduate off-campus registrations at Waterloo.

4. Data include minima-maxima adjustments for graduate entitlement and imputing adjustments.

TABLE I-4

DETERMINATION OF RESEARCH EXPENDITURES IN CONSTANT DOLLARS

	Research Expenditures in Current Dollars[1,2]	Research Expenditures in Constant Dollars, Deflated by:		
	($000's)	COU Combined Research Index[3] ($000's)	Combined Research Index Based on Actual Academic Salary Increases[4] ($000's)	CPI[5] ($000's)
1970-71	*62,471*	*261,385*	*251,899*	*232,234*
1975-76	*98,323*	*262,896*	*267,182*	*251,485*
1980-81	186,631	314,194	322,891	310,534
1981-82	229,486	343,028	353,599	339,979
1982-83	276,903	379,319	381,409	375,207
1983-84	295,964	380,906	388,404	381,397
1984-85	328,374	400,945	410,981	407,412
1985-86	346,606	404,441	412,136	413,118
1986-87	357,926	405,352	408,125	409,526
1987-88	391,654	425,711	426,638	429,445
1988-89	454,769	474,212	475,203	478,704
1989-90	484,020	484,020	484,020	484,020

1. Source: *Financial Report of Ontario Universities*, COFO-UO. Data include OMAF grants but exclude church related affiliates (the arts and science component at Toronto has been included since 1974-75), Algoma, Nipissing, Hearst, OCA and Ryerson, OISE prior to 1975-76, and Wilfrid Laurier prior to 1973-74.

2. COFO-UO figures were augmented by estimates provided by the University of Guelph of the direct costs of the research portion of the OMAF programme.

3. This index is a combination of 0.6 of a salary index and 0.4 of a non-salary index. The salary component is the industrial composite index from Statistics Canada's *Employment Earnings and Hours*. The non-salary component is the COU *Ontario University Non-Salary Price Index*.

4. This index is a combination of 0.6 of a salary index and 0.4 of a non-salary index. The salary component has been derived from actual average salary data for full, associate and assistant professors as reported in Statistics Canada's *Salaries and Salary Scales of Full-Time Teaching Staff at Canadian Universities*. The non-salary component is the COU *Ontario University Non-Salary Price Index*.

5. Source: *The Consumer Price Index*, Statistics Canada, monthly.

TABLE I-5

DETERMINATION OF NON-SALARY OPERATING EXPENDITURES IN CONSTANT DOLLARS

	Non-Salary Operating Expenditures in Current Dollars [1,2]	Non-Salary Operating Expenditures in Constant Dollars Deflated by:	
		Ontario University Non-Salary Price Index [3]	CPI [4]
	($000's)	($000's)	($000's)
1970-71	*90,522*	*386,846*	*336,513*
1975-76	*133,073*	*367,605*	*340,340*
1980-81	198,479	321,163	330,248
1981-82	223,797	317,893	331,551
1982-83	246,649	317,847	334,213
1983-84	274,944	339,018	354,309
1984-85	294,289	342,197	365,123
1985-86	315,485	351,320	376,025
1986-87	341,306	369,779	390,510
1987-88	359,362	376,295	394,037
1988-89	373,304	380,534	392,952
1989-90	410,289	410,289	410,289

1. Source: *Financial Report of Ontario Universities*, COFO-UO. Data exclude OMAF grants, MCU payments in lieu of municipal taxes, church related affiliates prior to 1978-79 (the arts and science component at Toronto has been included since 1974-75), Algoma in 1970-71, 1972-73, 1973-74, 1975-76 and 1976-77, Nipissing in 1970-71, Hearst in 1970-71, OCA prior to 1977-78, OISE prior to 1975-76, Ryerson prior to 1975-76 and Wilfrid Laurier prior to 1973-74.

2. The following adjustments have been made to the figures reported by COFO-UO:
   a) The salaries portion of *renovations and alterations* (assumed to be 60%) has been deleted.
   b) The salaries portion of *external contracted services* (assumed to be 75%) has been deleted.
   c) The salaries portion of *internal cost allocations* (assumed to be 60%) has been deleted.

3. Source: *The Financial Position of Universities in Ontario: 1991*. Council of Ontario Universities 1991.

4. Source: *The Consumer Price Index*, Statistics Canada, monthly.

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TABLE I-6

DETERMINATION OF OPERATING EXPENDITURES IN CONSTANT DOLLARS

	Operating Expenditures in Current Dollars [1]	Operating Expenditures in Constant Dollars, Deflated by:		
		COU Combined Index [2]	Combined Index Based on Actual Academic Salary Increases [3]	CPI [4]
	($000's)	($000's)	($000's)	($000's)
1970-71	*391,663*	*1,631,929*	*1,548,075*	*1,455,996*
1975-76	*705,758*	*1,867,085*	*1,907,454*	*1,805,008*
1980-81	1,061,502	1,811,437	1,882,096	1,766,226
1981-82	1,193,698	1,814,131	1,894,759	1,768,441
1982-83	1,350,742	1,889,150	1,902,454	1,830,271
1983-84	1,469,933	1,918,973	1,973,064	1,894,244
1984-85	1,548,952	1,921,777	1,988,385	1,921,777
1985-86	1,654,798	1,962,987	2,013,136	1,972,346
1986-87	1,750,686	2,012,283	2,030,958	2,003,073
1987-88	1,861,194	2,047,518	2,056,568	2,040,783
1988-89	1,989,386	2,089,691	2,096,297	2,094,091
1989-90	2,170,452	2,170,452	2,170,452	2,170,452

1. Source: *Financial Report of Ontario Universities*, COFO-UO. Data exclude OMAF grants, MCU payments in lieu of municipal taxes, church related affiliates prior to 1978-79 (the arts and science component at Toronto has been included since 1974-75), Algoma in 1970-71, 1972-73, 1973-74, 1975-76 and 1976-77, Nipissing in 1970-71, Hearst in 1970-71, OCA prior to 1977-78, OISE prior to 1975-76, Ryerson prior to 1975-76 and Wilfrid Laurier prior to 1973-74.

2. This index is a combination of 0.8 of a salary index and 0.2 of a non-salary index. The salary component is the industrial composite index from Statistics Canada's *Employment Earnings and Hours*. The non-salary component is the COU *Ontario University Non-Salary Price Index*.

3. This index is a combination of 0.8 of a salary index and 0.2 of a non-salary index. The salary component has been derived from actual average salary data for full, associate and assistant professors as reported in Statistics Canada's *Salaries and Salary Scales of Full-Time Teaching Staff at Canadian Universities*. The non-salary component is the COU *Ontario University Non-Salary Price Index*.

4. Source: *The Consumer Price Index*, Statistics Canada, monthly.

Appendix II

Glossary of Terms and Definitions

Glossary of Terms and Definitions

Academic salaries as used in this compendium refer to the average annual rates of salary for full-time teaching staff in the professorial ranks, i.e. full professor, associate professor and assistant professor.

BIU (Basic Income Unit) as defined in the MCU *Ontario Operating Formula Manual* is the basic funding unit used in the Ontario Operating Grants Formula and is intended to represent two terms of general degree work offered in a liberal arts college. Work in honours, professional and graduate programmes is weighted on a rough cost basis to this basic unit. Total enrolment of each institution is converted into *basic income units* by applying this weighting scheme and then multiplied by the current value of the BIU to produce basic operating income (BOI).

Church related affiliates refers to the federated and affiliated denominational universities and colleges that are affiliated with, and funded through, the provincially assisted universities. In 1978-79 the church related affiliates were Huntington University, University of Sudbury, Thorneloe University, McMaster Divinity College, St. Augustine's Seminary, Universite St. Paul, Queen's Theological College, Knox College, University of St. Michael's College, University of Trinity College, Wycliffe College, Victoria University, Regis College, Conrad Grebel College, St. Paul's College, Renison College, University of St. Jerome's College, Brescia College, Huron College, King's College and St. Peter's Seminary, Waterloo Lutheran Seminary and Dominicain College.

COFO-UO (Council of Finance Officers-Universities of Ontario) is an organization affiliated to the Council of Ontario Universities. Membership is composed of the senior financial officers at each of the provincially assisted universities of Ontario. The organization was formed to promote discussion and exchange of information among the membership and to provide advice and assistance on financial and other related matters to COU and its committees and to other agencies as appropriate.

Constant dollars are current dollars which have been deflated by means of an index (relative to a stated base year) to account for the decreased purchasing power of the dollar over time due to the effects of inflation.

CPI (Consumer Price Index) is the most widely-known price index used in Canada. Prepared by Statistics Canada, the CPI measures the percentage change through time in the cost of purchasing a constant *basket* of goods and services representing the purchases by a particular population group in a specified time period.

Eligible enrolment as defined in the MCU *Ontario Operating Formula Manual* refers to those students or programmes approved for formula funding support by the Ministry of Colleges and Universities. As the rules governing eligibility are subject to minor change from year to year, reference should be made to the MCU *Formula Manual* for a list of eligible students in a particular year.

Externally contracted services - This COFO-UO object of expense category includes all expenses for services which may be contracted to external agencies (except for renovations and alterations), e.g. cleaning contracts, security services and computing services.

Fiscal year is the university financial year. Since 1972-73 the university fiscal year has run from 1 May to 30 April.

Formula grants for each institution are calculated by deducting the standard fees (which vary by programme of study) for the institution from its basic operating income (see BIU).

FTE (Full-Time Equivalent) Enrolment represents full-time enrolment headcounts counted at unity plus part-time enrolment converted into FTE's of full-time enrolment. Part-time graduate students were converted by multiplying headcounts by 0.3. Part-time undergraduate students were converted by dividing course registration by a conversion factor (6.0 in 1970-71, 5.5 in 1972-73 and 5.0 in following years). Note: commencing in 1976-77, a new method of counting undergraduate enrolment was employed - see FFTE.

FFTE (Fiscal Full-Time Equivalent) Enrolment - Commencing in 1976-77 undergraduate enrolment (both full-time and part-time) was counted in the following manner. For each undergraduate student in a degree or diploma programme, the fiscal full-time equivalent enrolment for a term was calculated by dividing the units of study for that term by the normal full-time study load for the academic year for the programme. The fiscal full-time equivalent enrolment for the fiscal year is the sum of fiscal full-time equivalents for each term within that fiscal year.

Gross provincial expenditure refers to the total expenditures by a province in any given fiscal year. There are some problems in ensuring that the provincial budgetary expenditure data as shown in the provincial public accounts are consistent for all jurisdictions as certain items, such as expenditures of special funds, may be treated differently by each province. Statistics Canada has attempted to alleviate this problem by developing a measure called *Gross General Expenditure* which has been used as a measure of gross provincial expenditure. This measure incorporates budgetary expenditures as reported in the public accounts as well as expenditures of a number of government agencies.

Imputing adjustments as defined in the MCU *Ontario Operating Formula Manual* are adjustments made in the year following the reporting of estimated enrolments in first year in the programmes at a university which offers a common first year. These adjustments are based on the programmes actually taken by the students in their second year of study. A more detailed explanation may be found in the MCU *Formula Manual.*

Instruction and research salaries as reported by COFO-UO includes two object of expense categories under *salaries and wages - academic ranks* and *other instruction and research. Academic ranks* includes salaries paid to academic staff from lecturers to deans inclusive (both full and part-time) in faculties, academic departments or programmes, summer schools, credit extension courses and other academic functions and salary payment to staff members on paid academic leave. *Other instruction and research* includes payments to staff members without academic rank who are engaged in instruction and research as instructors, tutors, markers, demonstrators, teaching assistants, research assistants, invigilators, clinical assistants, post-doctoral fellows and includes payments made to graduate and undergraduate students undertaking these activities.

Internal cost allocation - This COFO-UO object of expense category is used for reporting internal transfers of costs among funds (e.g. operating, ancillary enterprises, sponsored research) within an institution.

Minima-maxima adjustments are adjustments made to graduate student BIU's reported by a university to ensure funding within a defined range independent of the actual number of years required by the individual student to complete his programme of study. A more detailed explanation may be found in the MCU *Formula Manual.*

Net teaching service refers to the net effect of the cross teaching between a provincially assisted university and its church related affiliates. Students who are registered at the affiliated institution may, in fact, receive all or part of their instruction from the provincially assisted university, or vice versa. Enrolment reported on a net teaching service basis is based on the net effect of this cross teaching rather than on where the students may be registered.

Non-academic salaries - This COFO-UO object of expense (labelled *other salaries and wages* in the COFO-UO report) includes salaries, wages and payments to non- instructional staff (support staff) including among others, technicians, clerical and secretarial, administrative and physical plant personnel. All salaries reported under functional areas other than instruction and research are included in this object of expense even though certain individuals may hold the equivalent of an academic rank.

Operating expenditures (or revenue) - As defined by COFO-UO the operating fund accounts for the cost of instruction, academic support services, administrative, plant maintenance and other operating expenses of the university financed by fees, grants and other general income. This fund will normally include all revenues and expenses which the university considers to be operating, within the functional operating areas instruction and (non-sponsored) research, library, computing, student services, administration, physical plant and other operating.

Operating grants are grants received from the government of the province in which the institution is located which are classified as income in the operating fund of the institution. Included are grants provided by all provincial ministries in support of academic programmes and/or general research and grants for system-wide cooperative projects (excepting grants to government advisory bodies). Excluded are grants for ancillary enterprises, non-credit instruction, municipal tax relief, provincially sponsored research, student aid, scholarships and capital projects.

Operating grants plus fees - In addition to operating grants (described above), this category includes tuition fees for credit programmes and miscellaneous fees (e.g. library fees, athletic fees, health service fees, graduation fees, laboratory or equipment fees, materials or breakage charges, fines and other fees that become income to the university). Excluded are revenue from non-credit course fees, residence fees, parking charges, student union levies, other ancillary fees and fees collected on behalf of another agency.

Operating income is defined as all income received for or transferred to meet the operating expenditures of university-level programmes. Excluded are capital funds (those funds which are designated for new buildings, major additions to existing buildings, building rental where there is a major component of operating expenditures in the province, debt servicing charges and land purchases), trust and endowment funds, sponsored research funds, ancillary enterprise funds, provincial government grants designated for property taxes or grants in lieu of taxes (as well as institutional payments to municipalities relating to property taxes), student assistance (grants and scholarships paid directly to the student by the provincial government or from institutional trust and endowment funds and loans from any source) and debenture repayments from both operating revenue and expenditure.

OUNSPI (Ontario University Non Salary Price Index) is a tool to assist in measuring the impact of inflation on non-salary expenditure in universities and a more accurate measure of the extent of inflationary erosion between any two years. Initially developed by COFO-UO, OUNSPI was first published in 1978.

Payments in lieu of municipal taxes are MCU grants to the Ontario universities individually designated for payment of municipal property taxes.

Provincial gross domestic product measures provincial output as the sum of incomes received by the factors of production, e.g. labour income, corporation products, farm income, etc. Data were obtained from Statistics Canada's *Experimental Data on Provincial Economic Accounts.*

Provincial personal income is defined as total income for the provincial population derived from wages, salaries and supplementary labour income, military pay and allowances, net income of farm operators and unincorporated business, interest, dividends and miscellaneous investment income, and current transfers from government, corporations and non-residents. These data were obtained from Statistics Canada's CANSIM system.

Provincially assisted universities of Ontario (as of 1978-79) include Brock University, Carleton University, University of Guelph, Lakehead University, Laurentian University, Algoma University College, Nipissing University College, Le College Universitaire de Hearst, McMaster University, Ontario College of Art, Ontario Institute for Studies in Education, University of Ottawa, Queen's University, Ryerson Polytechnical Institute, University of Toronto, Trent University, University of Waterloo, University of Western

Ontario, Wilfrid Laurier University, University of Windsor, and York University.

Research expenditures as used in this compendium refers to *sponsored research.*

Sponsored research - As defined by COFO-UO, this fund accounts for government and private sources of external grant support available and expended on research activities and projects. Expenses may include overhead charges by the university.